Figure x: Central Coast

type of water	**energy intensity** (white bulb = 0; yellow bulb = 1-500 Kwh./AF)
Colorado (Project)	*None in this region*
Federal (Project)	
State (Project)	
Local (Project)	
Local Imports	*None in this region*
Groundwater	

Figure x: Colorado River

type of water	**energy intensity** (white bulb = 0; yellow bulb = 1-500 Kwh./AF)
Colorado (Project)	
Federal (Project)	*None in this region*
State (Project)	
Local (Project)	
Local Imports	
Groundwater	

Figure x: North Coast

type of water	**energy intensity** (white bulb = 0; yellow bulb = 1-500 Kwh./AF)
Colorado (Project)	*None in this region*
Federal (Project)	
State (Project)	*None in this region*
Local (Project)	
Local Imports	*None in this region*
Groundwater	

Figure x: North Lahontan

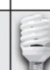
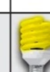
type of water	**energy intensity** (white bulb = 0; yellow bulb = 1-500 Kwh./AF)
Colorado (Project)	*None in this region*
Federal (Project)	*None in this region*
State (Project)	*None in this region*
Local (Project)	
Local Imports	*None in this region*
Groundwater	

Figure x: South Coast

type of water	energy intensity (white bulb = 0; yellow bulb = 1-500 Kwh./AF)
Colorado (Project)	
Federal (Project)	
State (Project)	
Local (Project)	
Local Imports	
Groundwater	

Figure x: San Francisco

type of water	energy intensity (white bulb = 0; yellow bulb = 1-500 Kwh./AF)
Colorado (Project)	*None in this region*
Federal (Project)	
State (Project)	
Local (Project)	
Local Imports	
Groundwater	

Figure x: San Joaquin

type of water	energy intensity (white bulb = 0; yellow bulb = 1-500 Kwh./AF)
Colorado (Project)	*None in this region*
Federal (Project)	
State (Project)	
Local (Project)	
Local Imports	*None in this region*
Groundwater	

Figure x: South Lahontan

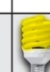
type of water	energy intensity (white bulb = 0; yellow bulb = 1-500 Kwh./AF)
Colorado (Project)	*None in this region*
Federal (Project)	*None in this region*
State (Project)	
Local (Project)	*Data forthcoming*
Local Imports	*None in this region*
Groundwater	

Figure x: Sacramento River

type of water	energy intensity (white bulb = 0; yellow bulb = 1-500 Kwh./AF)
Colorado (Project)	*None in this region*
Federal (Project)	
State (Project)	
Local (Project)	
Local Imports	*None in this region*
Groundwater	

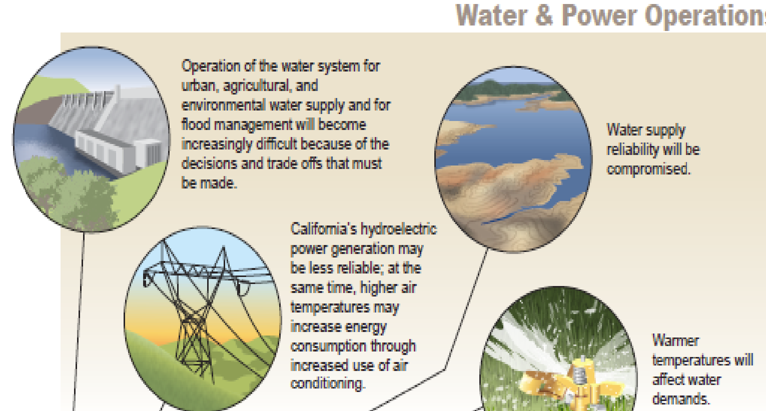
Figure x: Tulare Lake

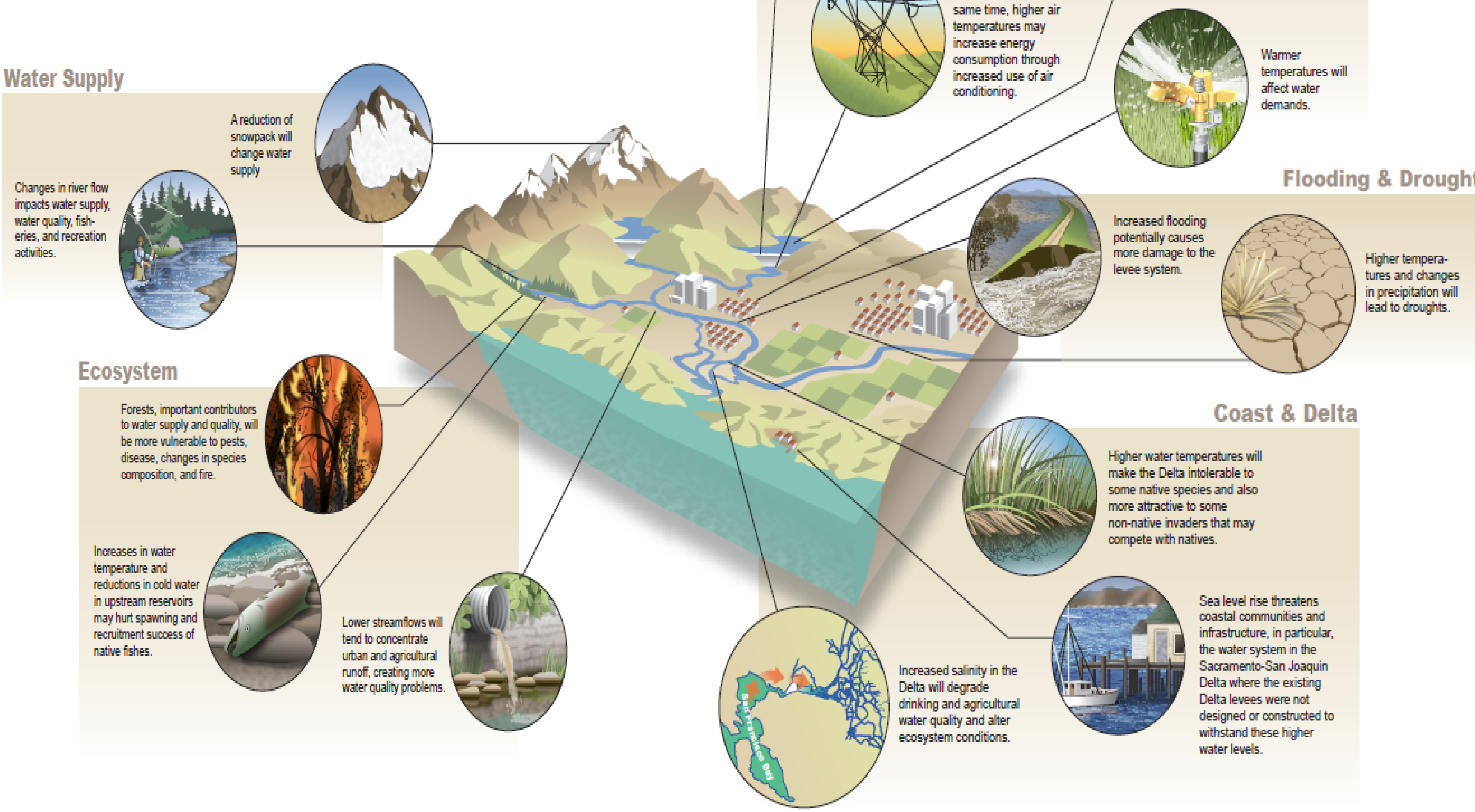
type of water	energy intensity (white bulb = 0; yellow bulb = 1-500 Kwh./AF)
Colorado (Project)	*None in this region*
Federal (Project)	
State (Project)	
Local (Project)	
Local Imports	*None in this region*
Groundwater	

What are the Expected Impacts from These Changes?

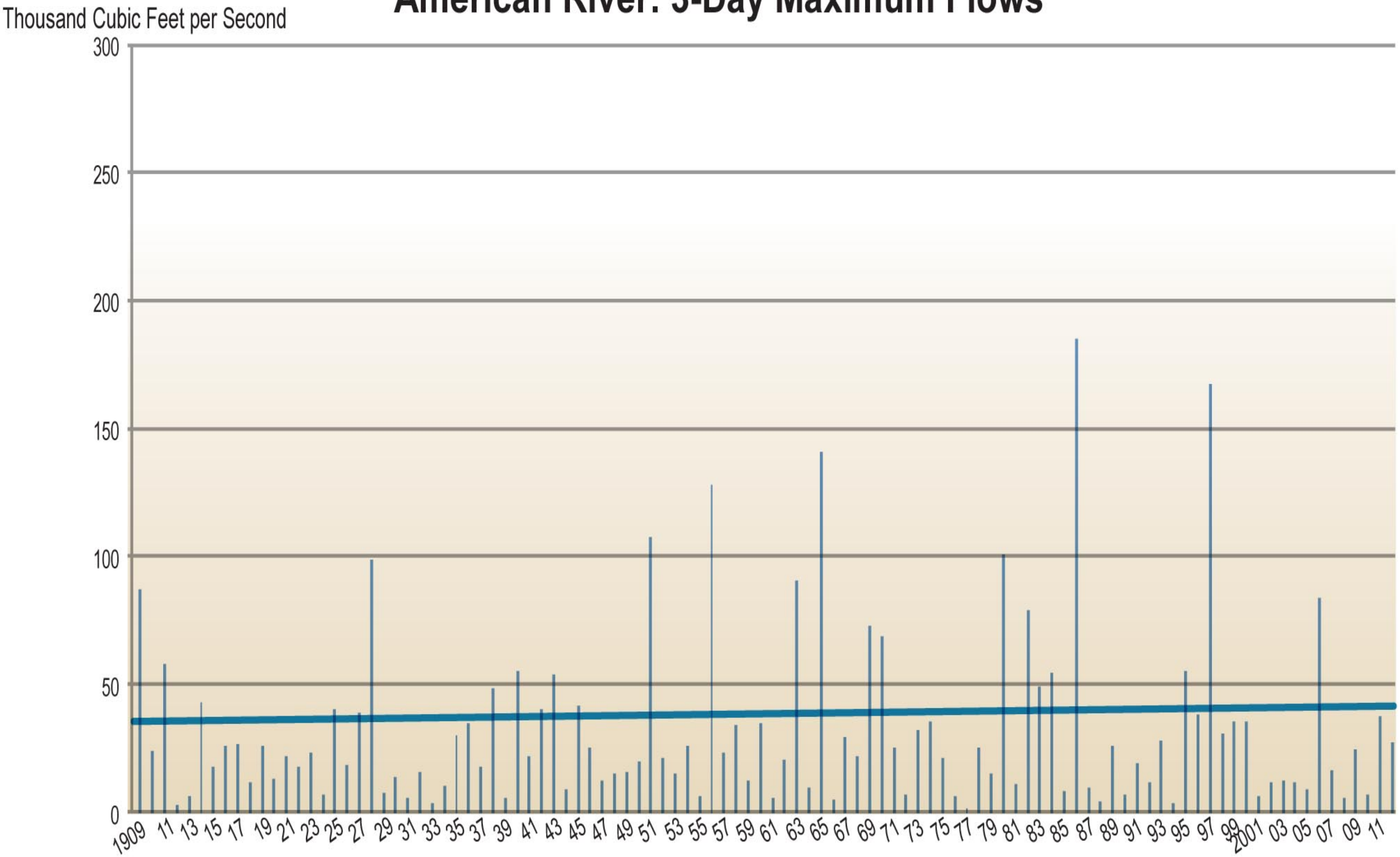
Climate change is already having a profound effect on California's water resources as evidenced by changes in snowpack, river flows, and sea levels. Scientific studies show these changes will increase stress on the water system in the future. Because some level of climate change is inevitable, the water system must be adaptable to change.

The impacts of these changes will gradually increase during this century and beyond. California needs to plan for water system modifications that adapt to the following impacts of climate change:

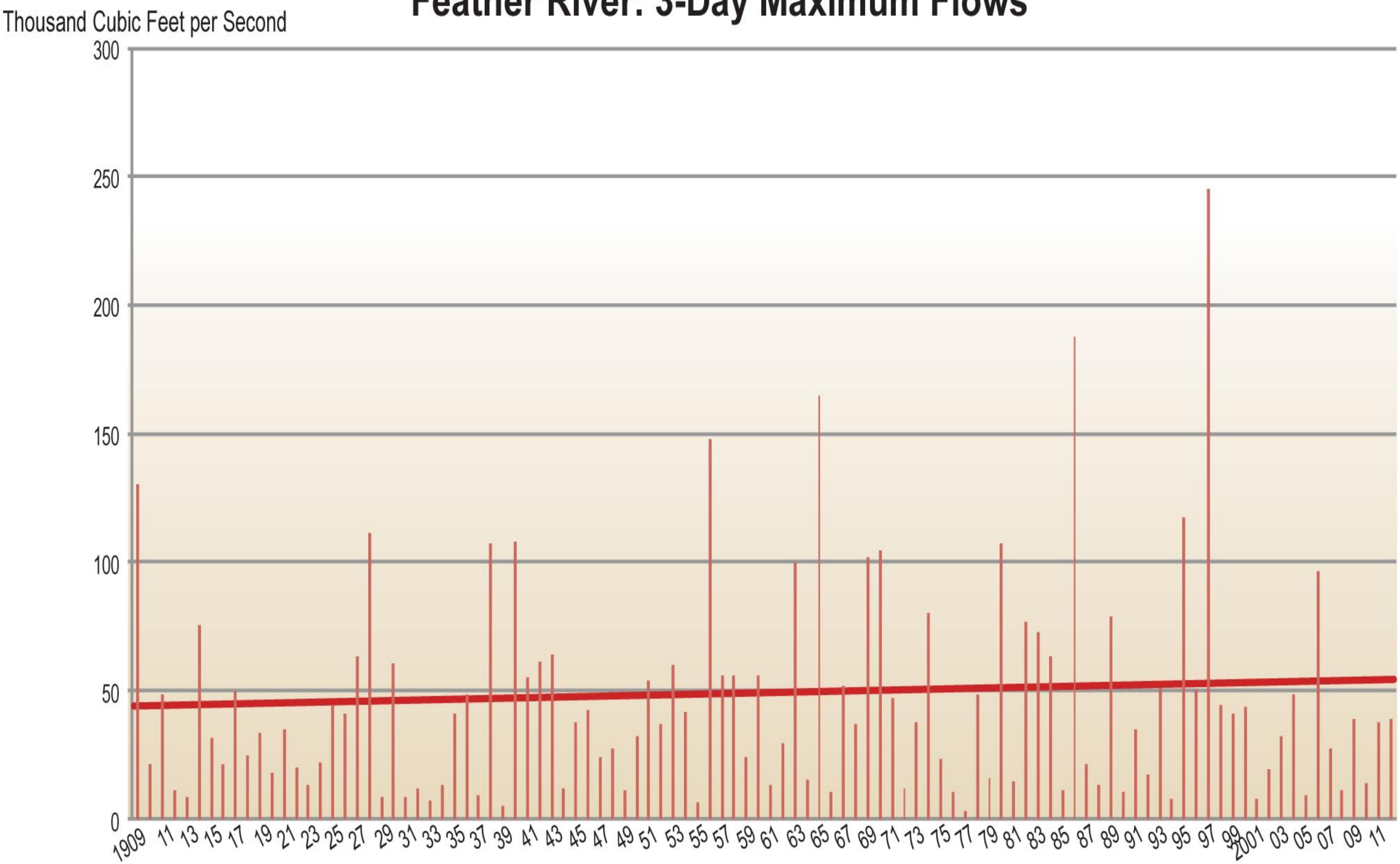




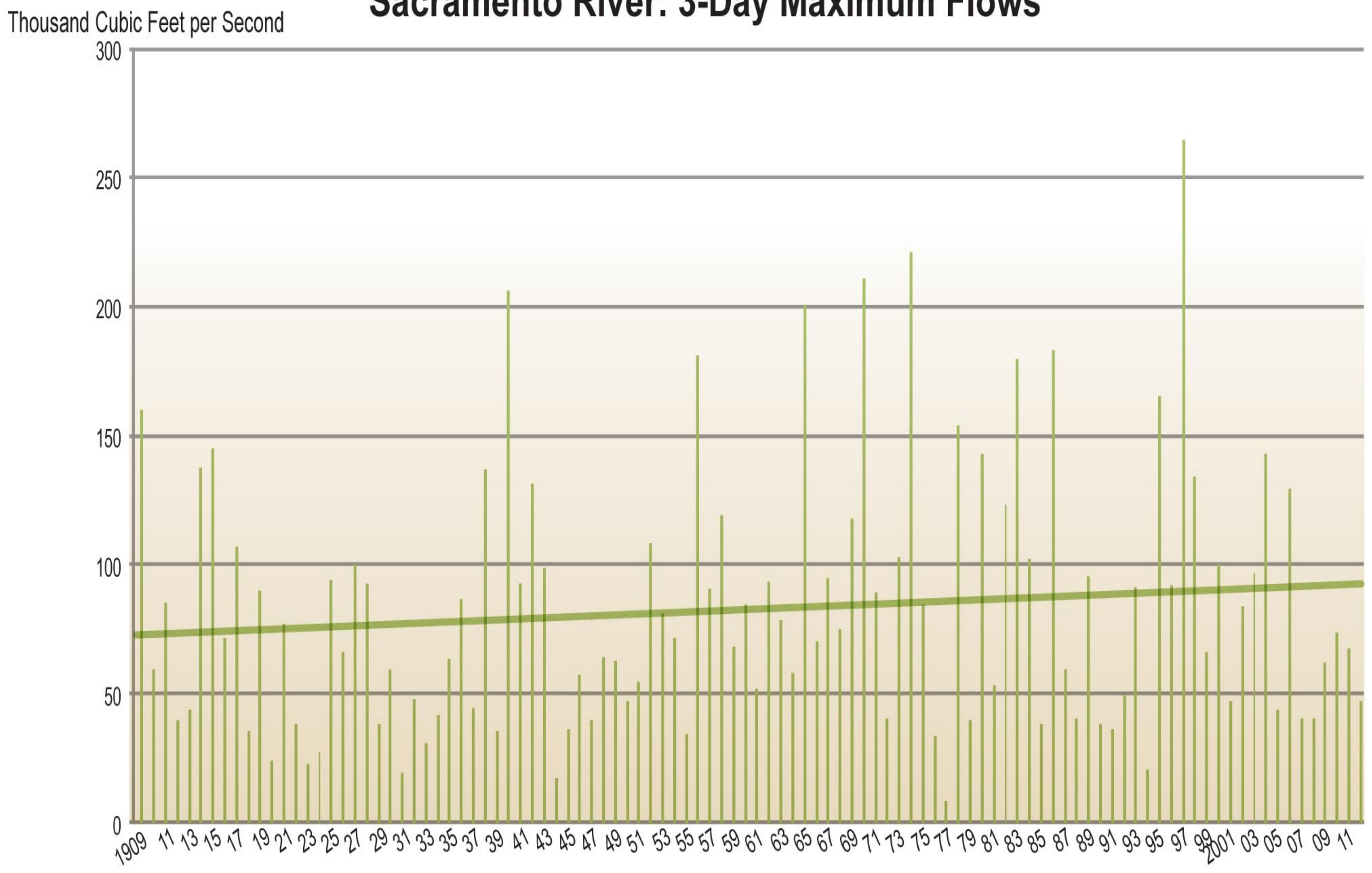
American River: 3-Day Maximum Flows

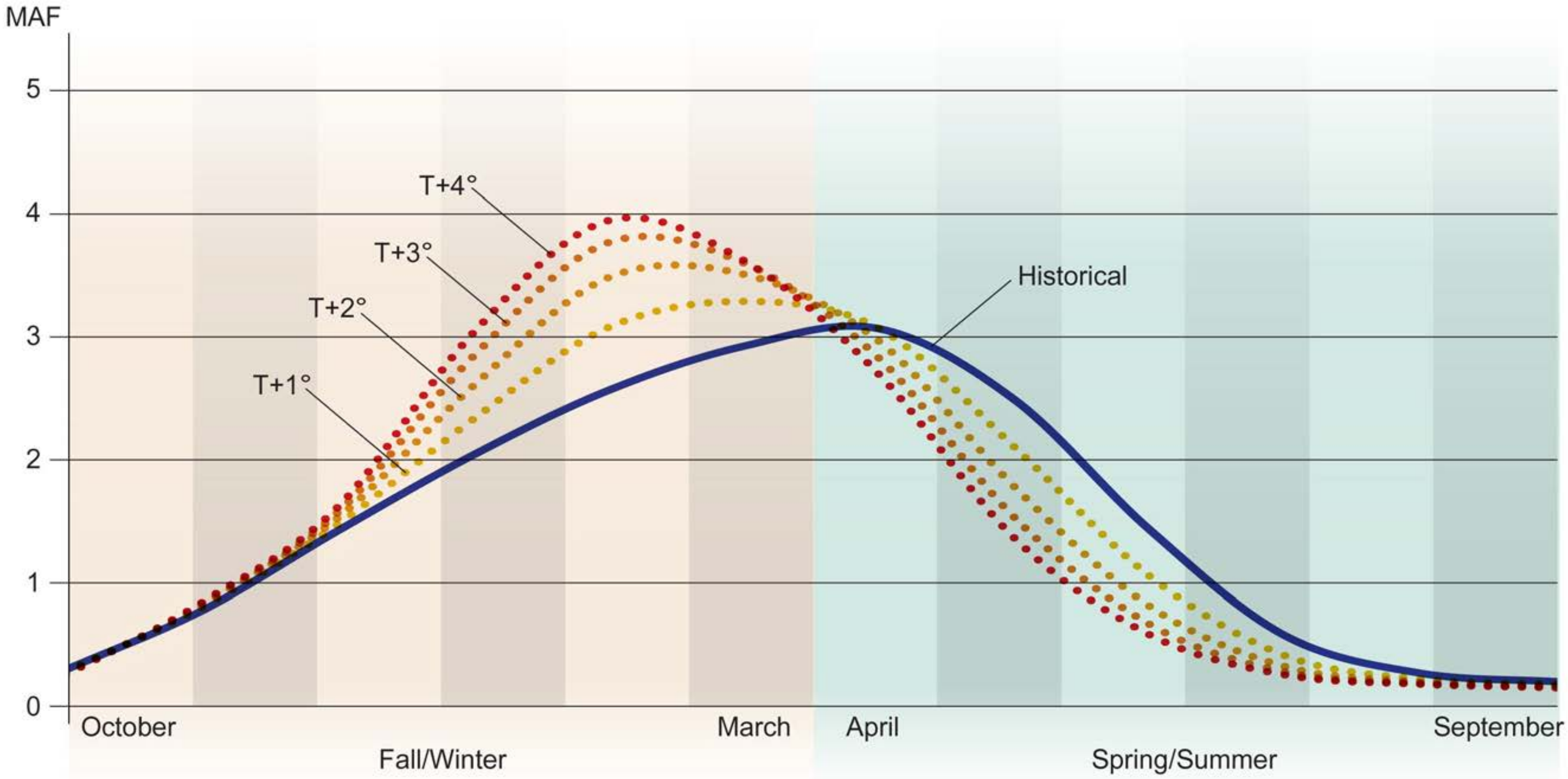


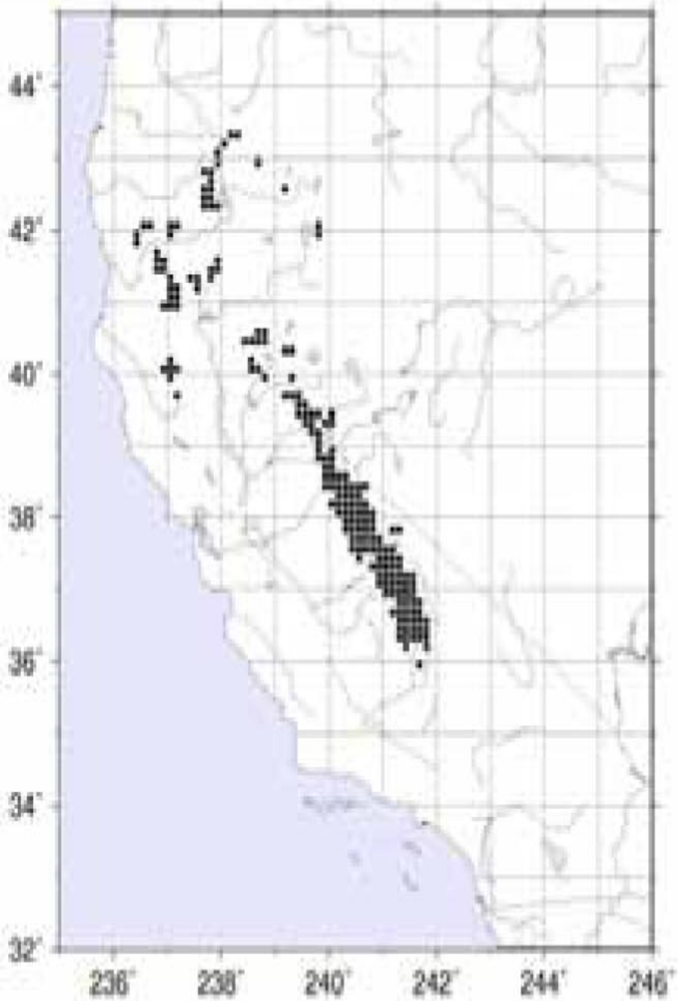
Feather River: 3-Day Maximum Flows

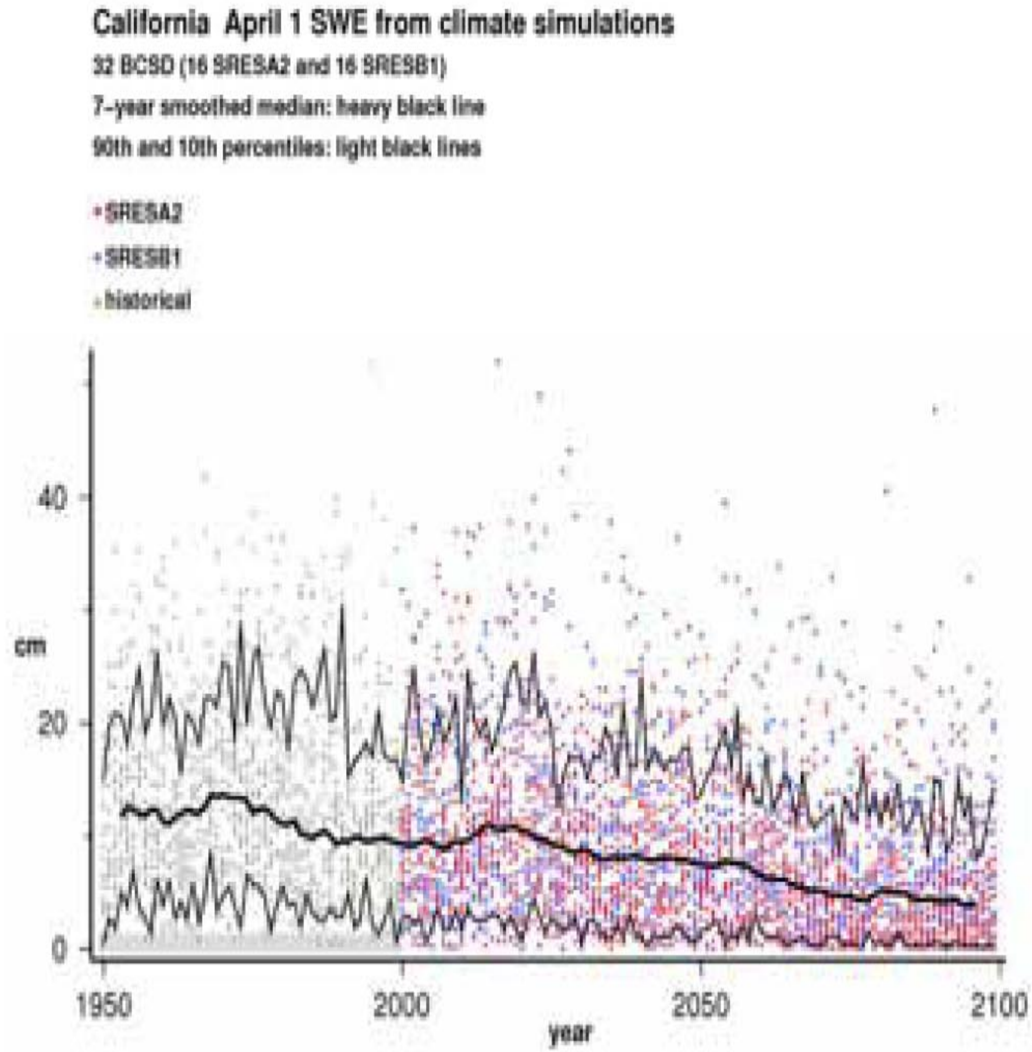


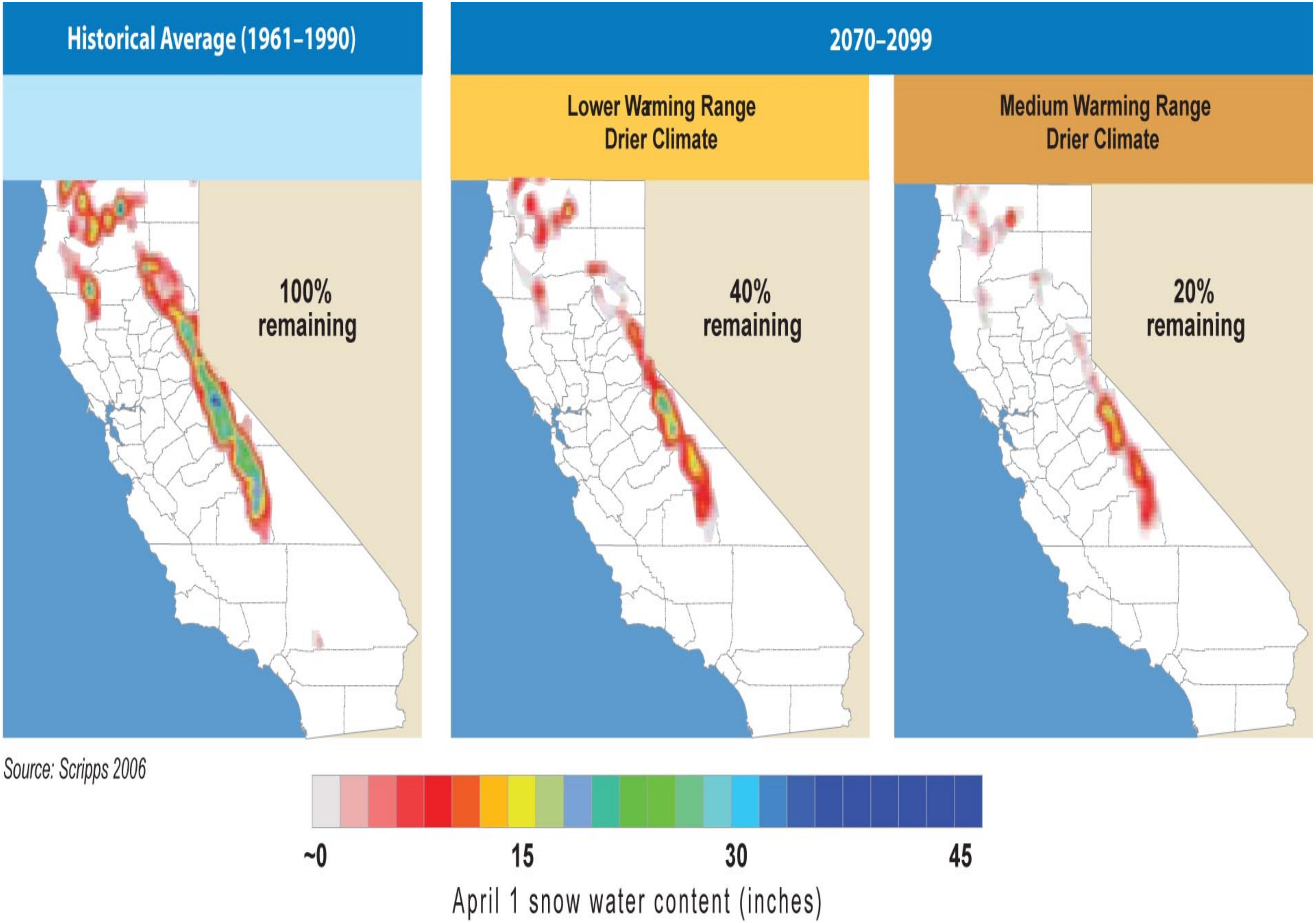
Sacramento River: 3-Day Maximum Flows




MAF
5
4
3
2
1
0
T+4°
T+3°
T+2°
T+1°
Historical
October
March
April
September
Fall/Winter
Spring/Summer


44°
42°
40°
38°
36°
34°
32°
236°
238°
240°
242°
244°
246°

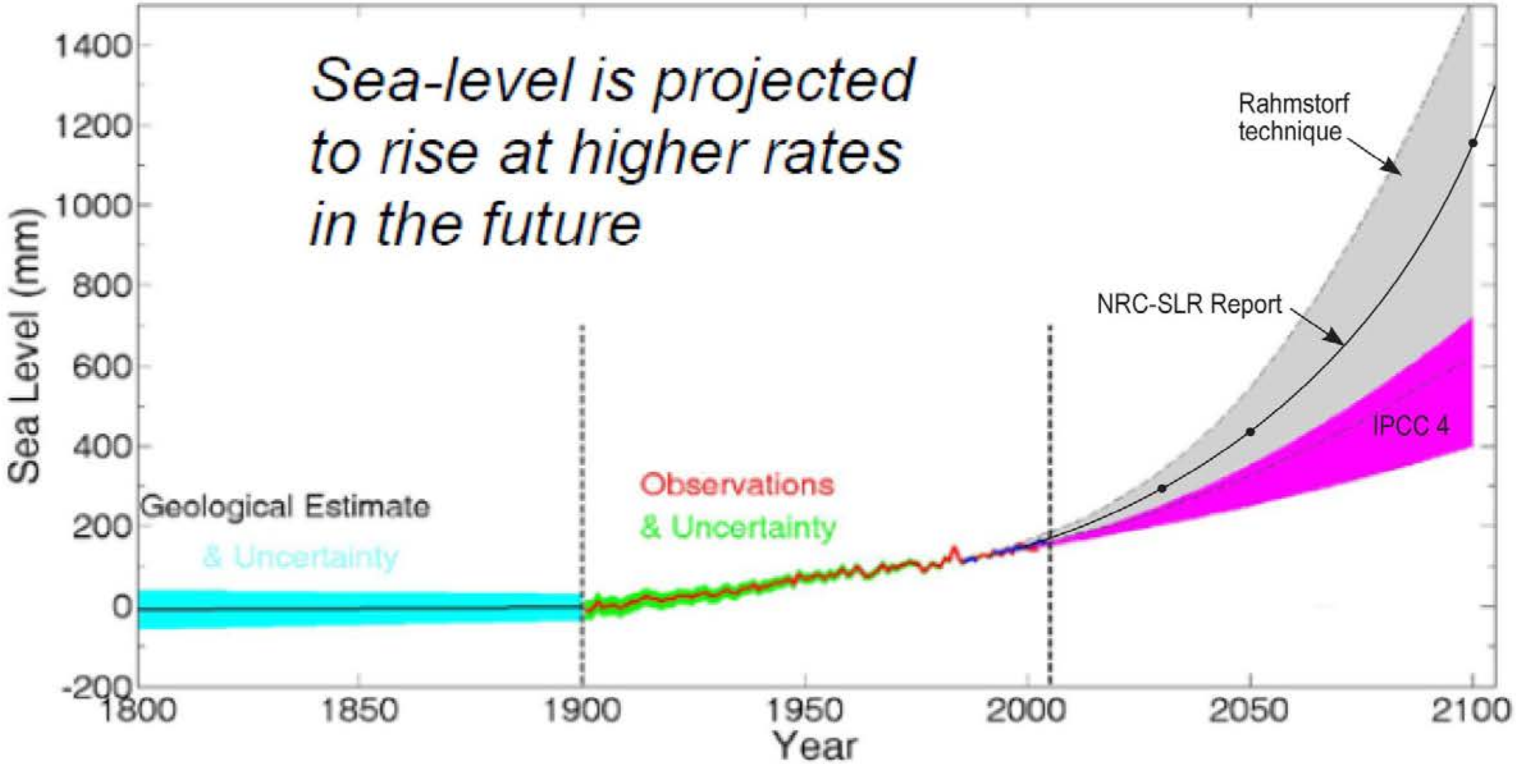

California April 1 SWE from climate simulations
32 BCSD (16 SRESA2 and 16 SRESB1)
7-year smoothed median: heavy black line
90th and 10th percentiles: light black lines
SRESA2
SRESB1
historical
cm
40
20
0
1950
2000
2050
2100
year



Source: Scripps 2006

Global sea-level is rising primarily because land ice is melting and ocean water expands as it warms.

1.7 mm per year over 20th century (from tide gages)
3.1 mm per year since 1993 (from satellites & tide gages)



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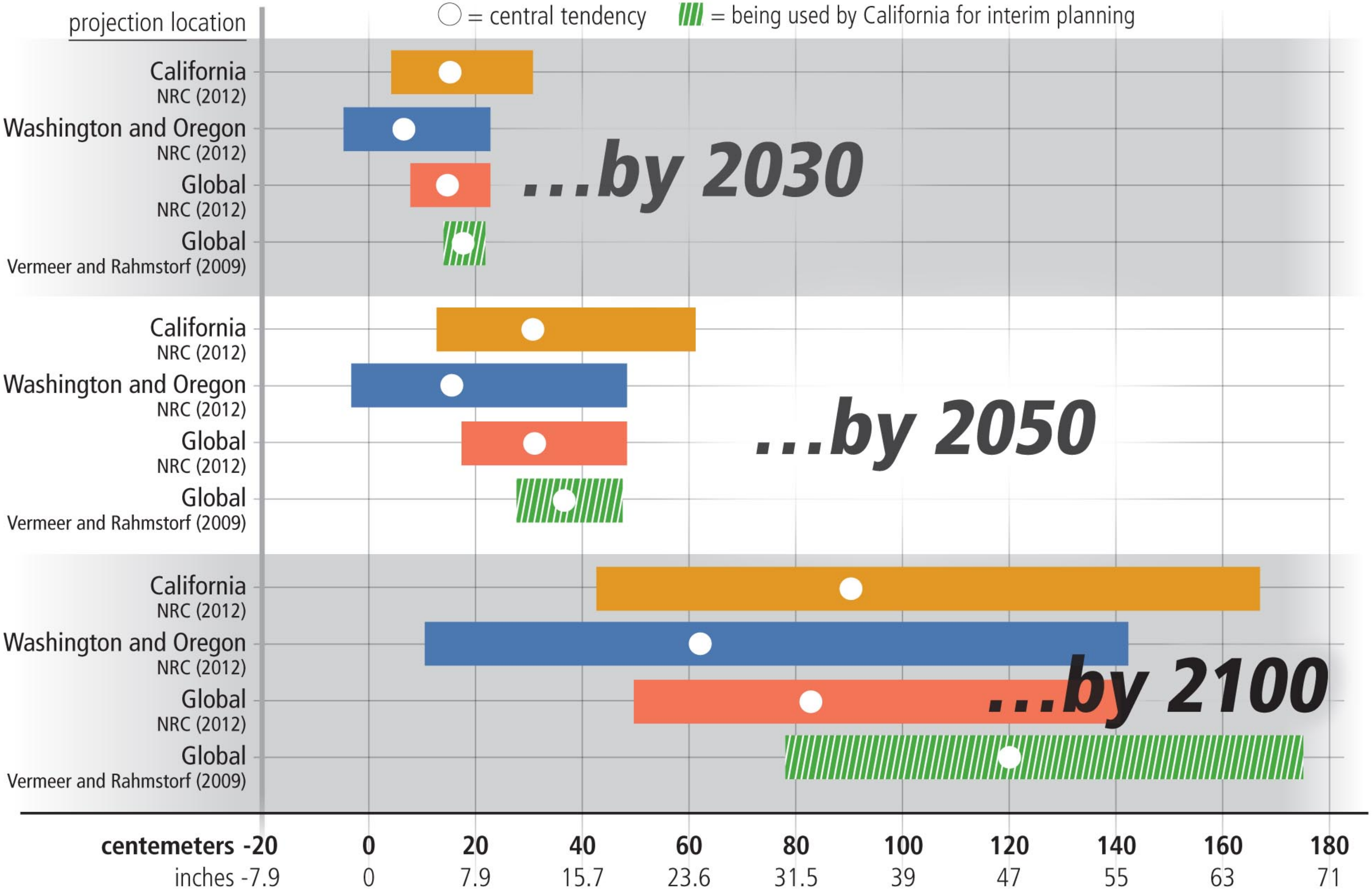
Regional and Global Sea Level Rise Projections

(relative to the year 2000)



Adapted from NRC (2012), Sea Level Rise for the Coasts of California, Oregon and Washington. http://www.nap.edu/catalog.php?record_id=13389

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